

Notice of Allowability

Application No.

09/733,980

Examiner

Nikita Wells

Applicant(s)

MURAKI ET AL.

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to "Amendment and Petition for Extension of Time" received 29 June 2004.
2. ☒ The allowed claim(s) is/are 1-4,8-12,14-18,20,22-25 and 28-32.
3. ☒ The drawings filed on 12 December 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Nikita Wells
Primary Examiner
Art Unit: 2881

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-4, 8-12, 14-18, 20, 22-25, and 28-32, are allowed.
2. The following is an examiner's statement of reasons for allowance:

Claims 1-4, 8-12, 14-18, 20, and 22-24 were allowed in the first "Office Action" mailed out July 9, 2003. The Applicant amended claims 22 and 23 and added claims 25-28 according to the "Preliminary Amendment" received October 14, 2003, whereby the newly added claims 25-28 were rejected under 35 U.S.C. 102(b) anticipated by Abe et al. (5,863,682) in an action dated February 20, 2004. In the most recent Amendment, the Applicant canceled claims 26 and 27; amended the independent claims 25 and 28 incorporating the allowable features of claim 1, as suggested by the Examiner; and added new claims 29-32, wherein independent claims 29 and 30 incorporate the allowable features of claim 3.

With respect to the independent claims 1, 15, and 22, and the newly amended independent claims 25 and 28, Abe et al., as well as any other prior art, fail to disclose that the plurality of data is generated based on each different value of a parameter representing at least one of an underlayer condition of the member to be exposed, a resist material, a forward scattering radius, and a backward scattering radius, and that the selection of any one of the data is used for controlling the dosage. Abe et al. disclose a method for dividing a drawing region into a plurality of stripes and drawing sequentially for each stripe, where one datum for proximity effect correction corresponds to each stripe and is not selected from a plurality of data so as to control the dosage in accordance with the underlayer condition of the member to be exposed, the resist material, etc., as in the case of the Applicant.

Art Unit: 2881

With respect to the independent claims 3, 9, 17, and 23, and the newly added independent claims 29 and 30, the reference of Abe et al., or any prior art, fails to disclose the generation of a plurality of control data based on each different parameter of a proximity effect correction calculation, and selecting one of the control data for performing the processing for proximity effect correction.

With respect to the newly added independent claims 31 and 32, the reference of Abe et al., or any prior art, fails to disclose an apparatus for irradiating a plurality of charged particle beams to a sample, and forming a pattern on the sample, said apparatus comprising: a memory for storing data for performing proximity effect correction; and a blanker array having a plurality of apertures two-dimensionally arrayed on a same plane located almost perpendicularly to a pass through direction of the plurality of charged-particle beams and a plurality of pairs of electrodes provided on both sides of each aperture, wherein the plurality of pairs of electrodes individually deflect the plurality of charged-particle beams, and individually control irradiating of the plurality of charged-particle beams to the sample.

The dependent claims 2; 4 and 8; 10-12, 14, and 24; 16; and 18 and 20; are allowed by virtue of their dependence upon claims 1, 3, 9, 15, and 17, respectively.

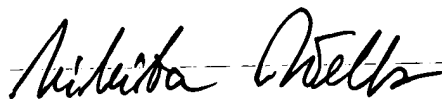
Conclusion

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2881

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikita Wells whose telephone number is (571) 272-2484. The examiner can normally be reached on 8:30 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Nikita Wells, Primary Examiner
Art Unit 2881
July 24, 2003